In the Claims:

Please cancel Claims 2, 3, 5, 6, 8, and 9 and amend Claims 1, 4 and 7 as follows:

1. (Currently Amended) A DNA microarray comprising:

a set of features on a substrate, each of the features including multiple copies of single stranded DNA probes of common sequence, and

features including positive control probes being included in the set of features, the ~~probes~~ features for the positive control probes ~~controls~~ being arranged in a pattern on the microarray such that the features having the positive control probes create a symbol recognizable to a human being through visual observation when illuminated, so that whether an event of interest has occurred can be determined by hybridizing fluorescently tagged nucleic acids from a sample to the microarray, illuminating the microarray, and observing the presence or absence of the symbol ~~visual pattern~~.

2.-3. (Cancelled)

4. (Currently Amended) A method for ~~building~~ designing a polynucleotide microarray comprising the steps of:

selecting a set of features, each feature including a plurality of polynucleotide probes of identical nucleotide sequence for detecting an event of interest, some of the features including probes designed to serve as ~~being~~ positive controls; and

arranging the set of features on a microarray substrate so that the features containing positive controls when illuminated form a ~~pattern~~ symbol recognizable to a human being through visual observation if the ~~positive control~~ features including positive control probes fluoresce,

wherein the set of features provides a polynucleotide microarray.

5.-6. (Cancelled)

7. (Currently Amended) A method for detecting whether an event of interest in a biological experiment has occurred comprising the steps of:

providing a DNA microarray comprising a set of features, each feature including a plurality of single stranded DNA probes of the same sequence, ~~for detecting the event of interest,~~ the microarray including features intended to serve as positive controls indicating that the event of interest has occurred, the features for positive controls being arranged in a pattern forming a character recognizable to a human being through visual observation;

hybridizing nucleic acids from a sample to the microarray; and

observing the presence or absence of the visual pattern to determine if the event of interest has occurred.

8.-9. (Cancelled)

REMARKS

By an Office Action dated January 16, 2003 in the file of this application the Examiner objected to all of the claims in the application for reasons of format and for prior art. By amendments to the claims made above both the issues of format and prior art have been addressed. Reconsideration of the merits of this application is respectfully requested.

First the Examiner objected to Claims 3, 6 and 9 by failing to further limit the subject matter of a previous claim. Those issues have been rendered moot by the withdrawal of those claims.

On page 3 of the Office Action is a set of rejections under §112, second paragraph, for wording informalities with the claims. The claim set has been substantially reworded in a way that, it is hoped, cures whatever indefiniteness the Examiner perceived in the claims before. It is ~~not~~ now recited specifically that the features include multiple copies of a single DNA sequence, recite that some of the features include positive control probes, and further specifically recite that the features for the positive control probes are arranged in the microarray in a physical location such that they create a symbol recognizable to human when eliminated. It is believed that the current language is now definite and precise. Each of the instances of informalities suggested by the Examiner has been addressed above.

Lastly, the claims rejected under 35 U.S.C. §102 on the grounds that the claims are anticipated by Lockhart. Lockhart shows a DNA array which includes ~~some~~ positive controls. The positive controls in the Lockhart patent are not arranged in a pattern recognizable to a human through visual observation, but are simply added to ~~find~~ fixed location on the array.

As indicated clearly in the specification of this application, it is intended in the practice of the present invention that the positive controls be arranged on the array so as to create a symbol or character which can be viewed by a human observer under a microscope. Lockhart does not recognize this objective and provides no indication that the control features in the microarray of Lockhart are arranged is such a character. All that Lockhart says at Column 16 of the specification is that normalization controls can be included in the array and can be located at the corners or edges of the array as well as in the middle. There is no indication in Column 16 of Lockhart that any character or symbol is formed. Similarly, in Column 24 of Lockhart, the existence of controls is again discussed but there is no recitation that a particular character or symbol is created by the positive controls when eliminated.

Lockhart simply does not anticipate the claims of the present invention. It is axiomatic for a rejection based on anticipation that each and every feature of the claim be found in the prior art. That is simply not the case with Lockhart.

Similarly, the patent to Noblett also discusses a microarray which is provided with fiducial marks on the microarray substrate. The Noblett microarray does have a set of features and includes some fiducial control probes. At Column 5 of Noblett, the existence of these control probes is discussed. In the discussion in the Noblett patent the only character or symbol is a fiducial mark 125 which is not created by the microarray. The fiducial mark recited in Noblett, and recited in the claims of Noblett, refer specifically to marks made on the substrate, like the marks indicate at 111, 127 and 125 in Figure 2. These are not features of the array. These are marks on the substrate. The concept is very different.

Accordingly, Noblett does not anticipate the claims of the present invention and does not describe a microarray in which a set of features providing positive controls is arranged so as to create a visually perceptible character or symbol following an experiment.

Accordingly, it is believed that the rejections made against the claims of the present patent application are overcome by the changes to the claims made above. Reconsideration of the merits of this patent application is respectfully requested.

A separate petition for extension of time is submitted herewith so that this response will be considered as timely filed. The applicants are eligible for small entity status.

Respectfully submitted,

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